

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
RENEWAL

PERMITTEE

Fox Metro Water Reclamation District
Attn: Thomas F. Muth
682 Route 31
Oswego, Illinois 60543-9417

<u>Application No.:</u> 96080085	<u>I.D. No.:</u> 093015AAE
<u>Applicant's Designation:</u> FOXFESOP	<u>Date Received:</u> December 7, 2001
<u>Subject:</u> Municipal Wastewater Treatment Plant	
<u>Date Issued:</u> April 22, 2002	<u>Expiration Date:</u> April 22, 2007
<u>Location:</u> 682 Route 32, Oswego	

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Two Natural Gas or Digester Gas Fired Generators
A Wastewater Treatment System with Screens, Tanks, and Clarifiers
Two Flares to Destroy Excess Digester Gas
57 Heaters
12 Boilers

pursuant to the above-referenced application. This permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons per year of NO_x and 100 tons per year of CO). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits issued for this location.
2. VOM emissions from the wastewater treatment system shall not exceed 6.9 tons/year. This limit is based on the maximum capacity of the facility of 42 million gallons of wastewater influent and 44 million gallons of stormwater influent per day, and special emission factors developed during the Joint Inventory Program by the California South Coast Air Quality Management District and the TOXCHEM + HAP Computer Model as indicated in the permit application.

- 3a. Emissions and operation of the 2 flares shall not exceed the following limits:

Digester Gas Burned		E M I S S I O N S			
		NO _x		CO	
(mmscf/Mo)	(mmscf/Yr)	(Tons/Mo)	(Tons/Yr)	(Tons/Mo)	(Tons/Yr)
17	50	0.6	1.7	3.2	9.25

- b. Emissions and operation of the 2 generators shall not exceed the following limits:

Natural and/or Digester Gas Burned		E M I S S I O N S			
		NO _x		CO	
(mmscf/Mo)	(mmscf/Yr)	(Ton/Mo)	(Ton/Yr)	(Ton/Mo)	(Ton/Yr)
0.6	5.5	0.8	7.8	0.34	3.4

These limits are based on standard AP-42 emission factors and the requested hours of operation for the generators with a maximum monthly capacity as indicated in Condition 2. Compliance with annual limits shall be determined from a running total of 12 months of data.

4. Emissions and operation of all 57 heaters and 12 boilers shall not exceed the following:

Natural Gas Usage		#2 Fuel Oil		NO _x		CO	
(mmscf/Mo)	(mmscf/Yr)	(Kgal/Mo)	(Kgal/Yr)	(T/Mo)	(T/Yr)	(T/Mo)	(T/Yr)
30	300	4.8	48	1.5	15	1.3	12.6
PM		VOM		SO ₂			
(T/Mo)	(T/Yr)	(T/Mo)	(T/Yr)	(T/Mo) (T/Yr)			
0.1	1.2	0.08	0.83	0.1 1			

These limits are based on standard AP-42 emission factors. Compliance shall be determined from a running total of the previous 12 months data.

5. No person shall cause or allow the emissions of sulfur dioxide into the atmosphere from any fuel combustion emission source to exceed 0.3 lbs/mmBtu in any one hour period when burning distillate fuel oil exclusively in accordance with 35 Ill. Adm. Code 214.122(b)(2).
6. At the above location, the Permittee shall not keep, store, or utilize:
- a. Distillate fuel oil (Grades No. 1 and 2) with a sulfur content greater than the larger of the following two values:
- i. 0.28 weight percent, or

- ii. The wt. Percent given by the formula: Maximum wt. Percent sulfur = $(0.00005) \times (\text{Gross heating value of oil, Btu/lb})$.
- 7. Organic liquid by-products or waste materials shall not be used in any fuel combustion emission source without written approval from the Illinois EPA.
- 8. The Illinois EPA shall be allowed to sample all fuels stored at the above location.
- 9. The Permittee shall notify the Illinois EPA prior to any change in the type of fuel used at the source.
- 10. Distillate fuel oil, natural gas, and digester gas shall be the only fuel fired in the above referenced fuel combustion emission sources.
- 11. The generators shall not operate for more than 744 hours per month and 1,250 hours per year, each.
- 12a. No person shall cause or allow the emissions of carbon monoxide into the atmosphere from each individual fuel combustion emission source to exceed 200 ppm corrected to 50% excess air in accordance with 35 Ill. Adm. Code 216.121.
- b. This permit is issued based on the emissions of volatile organic material (VOM) from the wastewater treatment system not exceeding 8 lb/hour, pursuant to 35 Ill. Adm. Code 215.301.
- 13. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the nuisance.
- 14. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on all the above-referenced equipment such that the equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.
- 15. The Permittee shall maintain an operating log for the equipment, which at a minimum includes any adjustments of the equipment's operating parameters, and the results of inspections, maintenance, and repair activities.
- 16a. The Permittee shall maintain records of the following items:
 - i. Natural gas used for entire plant (mmscf/mo and mmscf/yr);
 - ii. #2 fuel oil burned (gal/mo and gal/yr);
 - iii. The amount of digester gas burned in the generators (cubic feet per month and cubic feet per year); and

- iv. NO_x, CO, and VOM emission calculations (tons/mo and tons/yr).
 - b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
17. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.
18. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
19. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:
- Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
- and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:
- Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016
20. The Permittee shall submit the following additional information with the Annual Emission Report, due May 1st of each year: Amount of digester gas burned in the generators (mmscf/mo and mmscf/yr); natural gas burned for the entire plant (mmscf/mo and mmscf/yr); #2 fuel oil burned (gal/mo and gal/yr); and NO_x, CO, and VOM emission calculations (tons/mo and tons/yr).

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If you have any questions on this permit, please contact Randy Solomon at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

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cc: IEPA, FOS Region 1
IEPA, Compliance Section
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the wastewater treatment plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is handling 42 million gallons of wastewater influent and 44 million gallons of stormwater influent per day. The resulting maximum emissions are well below the levels, e.g., 100 tons per year of NO_x and 100 tons per year of CO at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

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30	300	4.8	48	1.5	15	1.3	12.6

PM <u>(T/Mo) (T/Yr)</u>		VOM <u>(T/Mo) (T/Yr)</u>		SO ₂ <u>(T/Mo) (T/Yr)</u>	
0.1	1.2	0.08	0.83	0.1	1

These limits are based on standard AP-42 emission factors. Compliance shall be determined from a running total of the previous 12 months data.

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